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WHEN SOCIAL NETWORKING TURNS TO SOCIAL OVERLOAD: EXPLAINING THE STRESS, EMOTIONAL EXHAUSTION, AND QUITTING BEHAVIOR FROM SOCIAL NETWORK SITES' USERS

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Abstract

This research responds to a current phenomenon that individuals experience fatigue, while using social network sites, such as Facebook, which original intend to provide hedonic value to users. To explain this current phenomenon, we propose and evaluate a research model based on the stress-strain-outcome model. Focal point is the stressor social overload, which induces feelings of being emotional exhausted. For that reason, some users of social network sites start to get dissatisfied and report an increasing discontinuous usage intention. In addition, the research article provides evidence for the fact that the effect of stress on the two outcome variables satisfaction and discontinuous usage intention is fully mediated through strain. This is validated with an empirical survey with 523 Facebook users. Several implications for technology adoption research are discussed.

Keywords: Discontinuous Usage Intention, Emotional Exhaustion, Social Overload, Stress-Strain-Outcome Model, Hedonic Technology Usage, Stressor, Strain, Satisfaction, Facebook, Social Network Site

1 Introduction

No one would disagree that employees could feel dizzy and emotionally exhausted after using an ERP system all day long, as the system fulfils the utilitarian purpose of reducing process cost and time and enhancing flexibility. However, one would at least wonder if somebody is getting strained after using a technology fulfilling the purpose to provide hedonic value to the user. Nevertheless, these observations were made, as individuals experience fatigue while frequently using the hedonic social network site Facebook (Gartner 2011). Nevertheless the reasons fostering fatigue have not yet been identified.

As opposed to Information Systems (IS) research, fatigue is known and deeply investigated in psychology research. It is an "*aversive and potentially harmful psychological reactions of the individual to stressful [situations]*" (de Croon et al. 2004, p.443) and result from stressful and adverse feelings. These situations and feelings, which induce feelings of fatigue, are named stressors and are among others induced by changes in technologies or an individual's social environment (Ragu-Nathan et al. 2008; Cheung and Tang 2010). Here, prior research suggests recent examples.

With the invasion of smart phones in every situation of life, individuals are being reachable anytime and anywhere, especially for work purposes. This leads to a strong feeling of irritation and the smartphone is being considered more and more as a symbol of stress. Another recent example is the growing usage of mobile email, particularly in organizations, which blur the boundaries between free time and office (Middelton and Cukier 2006). New possibilities of sending emails to colleagues in less time than sending SMS or paper-based messages and the situation that almost everybody has the possibility to check and write emails everywhere, results in increasing reports of being stressed by emails (Barley et al. 2011).

Comparable to the two described phenomena, we suggest that social network sites (SNS) can become a symbol of stress, despite its voluntary usage (Venkatesh et al. 2003) and hedonic (van der Heijden 2004) purpose. The growing disclosure of individuals in Facebook leads to a vast body of messages an individual is confronted with after logging in (Krasnova et al. 2010). Next to irrelevances (e.g., "I am waiting for the bus"), messages are included, which directly call for users' support and assistance (e.g., "Help me! I need an apartment in New York!"). Other messages (e.g., "I am sick") are just written to arouse pity so that users feel impelled to click on the *Like*-button to sympathise with the author of such messages. All these lead to users' perception of getting stressed. As this kind of stress is induced by the *social* environment, in terms of social stimuli, and leads immediately to a situation of being *overload* (McCarthy and Saegert 1978; Baum et al. 1982; Evans and Lepore 1993), the stressor proposed within this research is named social overload. As this situation is repeated every single day, it depicts a minor day-to-day stressor that has in the end a powerful effect on life (Helms and Demo 2010). Based on these feelings, more and more individuals perceive Facebook as a symbol of stress, feel fatigue, and are dissatisfied with this situation (Gartner 2011). At the end of the day, individuals intend to change their own behaviour by decreasing usage or even deregister. Thus, the consistent research question of this article is:

> *How does social overload-induced stress influence individuals' voluntary and hedonic ICT usage?*

The remainder of this article is structured as follows. First, the three-layered stress-strain-outcome model is explained. Then, each layer of this model is explained in more detail and four hypotheses are derived. After providing empirical evidence for the research model, results are discussed.

2 Model of Social Overload-induced Stress and Voluntary IT Usage

In this section, we base on the stress-strain-outcome model (Koeske and Koeske 1993) and describe all layers of the proposed model: a stressor in terms of social overload, strain in terms of emotional exhaustion, and outcome variables in terms of satisfaction and discontinuous usage intention. Based on this model, we present a model of social overload-induced stress in voluntary and hedonic IT usage settings.

2.1 Stress-Strain-Outcome Model

The theoretical foundation of this research is the three-layered stress-strain-outcome model (Koeske and Koeske 1993). The model reveals how stressors become noticeable in an individual's life. To explain this impact, the model uses the three variables stress, strain, and outcome. It suggests a direct influence of stressors on strain, while only the latter is actually a contributing factor for distinct outcome variables.

The stress-strain-outcome model considers stressors as stimuli of an individual's environment that are perceived as irritating, troublesome, or disruptive. This is in line with Berg et al. (2010), who define stress as "*adverse feelings, such as anxiety, fear, irritation, pressure, and sadness that are caused by an imbalance between the individual's motivations and abilities and the environment's requirements and supports*" (Berg et al. 2010, p. 988). The outcome of such an imbalanced ratio between high demands, perceived overload, and low levels of control is a psychophysiological reaction named strain (Weiss 1983; Spreitzer et al. 1997). Hence, it depicts a psychological reaction to stressful situations (de Croon et al. 2004) and can be captured by emotional exhaustion (Koeske and Koeske 1993). This psychological reaction mediates the effect of perceived stressors on outcome variables. Here, outcomes depict psychological and behavioural consequences of strain (Koeske and Koeske 1993) as attitudes or behavioural intentions. The nomological network of the stress-strain-outcome model is illustrated on top of Figure 1.

Summing up, the stress-strain-outcome model (Koeske and Koeske 1993) suggests strain as an outcome of perceived stressors and as an antecedent of outcome variables. Prior stress-related research recommends satisfaction and usage behaviour as interesting outcome variables (Ragu-Nathan et al. 2008; Tarafdar et al. 2010/2011) and suggests these two outcomes as different from strain (Hobfoll 1989; Tetrick et al. 2000). Tetrick et al. (2000) also use this stress-strain-outcome model and suggest emotional exhaustion as strain variable mediating the influence of stressors such as overload or workload on the outcome variable satisfaction in work-related settings.

The stress-strain-outcome model is used to investigate stress-induced discontinuous technology usage. Hence, stress, strain, and outcome variables are transferred into the context of general technology adoption research and are presented in the following sub-sections.

2.2 Stressor: Social Overload

Since the 1980s, social psychology literature discusses the phenomenon of crowding (e.g., Baum et al. 1982; Evans and Lepore 1993; McCarthy and Saegert 1978). It suggests that through emerging densely populated neighbourhoods and the rising number of individuals living in close proximity, individuals are forced to increase social contacts and interactions. Associated negative consequences include the perception of stress or withdrawal from social contacts. When an individual perceives that others demand too much attention, the probability of perceiving the stressor social overload increases. This is known as social overload. McCarthy and Saegert (1978) suggest that "*[h]igh densities contribute to social and cognitive overload by increasing the number of other people with which an*

individual may have to deal and … that some experience of them is difficult for the individual to avoid" (McCarthy and Saegert 1978, p. 254).

Interpreted in terms of a social network site, users receive a high number of irrelevant notifications of each connected friend. This situation is comparable to the real world and results in feelings of social overload; only that it happens in the online space, where high density is observable through an increasing number of users. In more detail, social overload in virtual spaces is understood as a user's feelings of too high social demands as being responsible to take care of friends, to address their problems, or to amuse them (e.g., to take care of Facebook friends, to amuse Facebook friends, to address problems of Facebook friends, to be responsible to talk to Facebook friends). Such responsibilities create feelings of being overloaded due to the plenty of unwanted social demands (Evans and Lepore 1993) and individuals see their duty to act towards enhancing the quality of life of others (Blackwelder and Passman 1986). Summing up, social overload depicts a minor day-to-day hassle (Helms and Demo 2010), whose necessity for deeper investigation is motivated by Song et al. (2011).

2.3 Strain: Emotional Exhaustion

A potential consequence of perceived stress (Cooper et al. 2001; Weiss 1983; Hurrell et al. 1998) is strain. De Croon et al. (2004) consider strain as psychological reaction to stressful situations. In interpersonal relationships, strain is the degree of emotional strain caused by social relationships (Due et al. 1999; Avlund et al. 2004). In this article, we suggest the stressor social overload as such an essential function of social relationships that leads to perceptions of strain.

To capture an individual's strain, Cropanzano et al. (2003) suggest conceptualizing this psychological consequence of stressful situations with the help of emotional exhaustion, as it "*describes feelings of being emotionally overextended*" (Wright 1998, p. 486), which are perceived in a psychological or behavioural manner. "*Psychological strains are affective reactions, including attitudes or emotions*" (Spector et al. 2000, p. 211) and are reflected in lowered satisfaction, commitment, or depression. Behavioural strains are defined as actions in response to stressors (Spector et al. 2000). In our context, emotional exhaustion is seen as an affective reaction and emotion, which describes feelings of being emotionally overextended due to the usage of social network sites as Facebook.

Consequences of strain can be a decreasing behavioural intention, a preference for staying at home from work, poor job performance, or an increased turnover intention. Mostly, this understanding is used to investigate antecedents or consequences of emotional exhaustion of employees in work related settings such as an increased voluntary turnover (Wright and Cropanzano 1998). Despite of the knowledge that strain mediates the influence of stress on outcome variables, prior IS-research neglects a direct emotional strain factor as emotional exhaustion (Ragu-Nathan et al. 2008). Thus, in order to use a direct emotional strain factor we apply the concept of strain in terms of emotional exhaustion to technology adoption research. Based on the fact that stressors affect strain (Koeske and Koeske 1993) and social overload is identified as such a stressor, we assume that:

H1: The more an individual perceives social overload, the higher is an individual's emotional exhaustion.

2.4 Outcome: Satisfaction & Discontinuous Usage Intention

Because reasons for the initial user acceptance differ from reasons for continuous usage (Karahanna et al. 1999; Venkatesh and Morris 2000), several research articles deal with the subject of continuous usage intention (Bhattacherjee 2001). The underlying theory is the expectation-disconfirmation theory, which is transferred from consumer behaviour to IS-research by Bhattacherjee (2001). It suggests that an individual's satisfaction is the most essential influencing factor for continuous usage, because it determines the willingness to repeat certain behaviours. On a negative side, low satisfactions increase

the probability of stopping to repeat the behaviour. This fact that individuals intend to change their behavioural pattern or even radically stop continuing their behaviour is in the following labelled as discontinuous usage intention. Applied to the context of social network sites, an individual's discontinuous usage intention reflects users' purpose to decrease their SNS usage intensity or even to delete their accounts. This understanding is based on Bhattacherjee's (2001) concept of continuous usage intention and the general discussion of resistance (Bovey and Hede 2001). In contrast to Bovey and Hede's (2001) or Kim and Kankanhalli's (2009) understanding of user resistance, which focus on the initial intention to resist, the concept of discontinuous usage intention concerns the situation that an individual used a technology in the past but decreases or stops its usage now. In line with expectation-disconfirmation theory, we suggest that such discontinuous usage intentions increase while satisfactions decrease. Therefore, we assume (Figure 1) that:

H4: The higher an individuals' satisfaction, the lower an individual's discontinuous usage intention.

The stress-strain-outcome model suggests that strain has an influence on outcome variables. Work-related research argues that strain becomes obvious in a psychological and behavioural manner (Tarafdar et al. 2010/2011, Spector et al. 2000). Applied to hedonic- (van der Heijden 2004) and voluntary-related (Venkatesh et al. 2003) IT usage research, satisfactions and discontinuous usage intentions represent outcomes of psychological strain. Based on this, we hypothesize (Figure 1) that:

H2: The more an individual perceives emotional exhaustion the lower is an individual's satisfaction.

H3: The more an individual perceives emotional exhaustion the higher is an individual's discontinuous usage intention.

3 Empirical Evidence

3.1 Research Methodology

In order to validate the proposed hypotheses, we performed two distinct surveys. The first one served as a pre-study. We asked 104 students to fill out our survey and made use of these datasets to validate our measurement items. In a second step, we designed an online survey and sent out 1,800 emails inviting individuals to take part in our survey. The email addresses were collected in prior surveys, in which participants allowed us to contact them for subsequent studies. In the end, 523 Facebook users took part in the study, which corresponds to a response rate of about 29 per cent. The demographic characteristics of these 523 individuals and their extent of Facebook usage are illustrated in Table 1.

Demographics								
Gender	Men	46.0%	Frequency of Usage	hourly	9.4%	Number of friends	>350	14.4%
	Women	54.0%		several times a day	53.0%		301-350	10.8%
Age	<19	10.2%		once a day	12.5%		251-300	7.6%
	19-24	42.5%		several times a week	12.4%		201-250	20.6%
	25-34	37.3%		once a week	4.6%		151-200	13.8%
	35-44	5.4%		several times a month	3.2%		101-150	11.7%
	45-54	3.2%		once a month	4.9%		51-100	13.0%
	>54	1.4%					0-50	8.1%

Table 1. Demographics of the 523 Facebook users

3.2 Measures

Social Overload. An individual's social overload is captured with the help of six items and a 7-point-Likert scale (1=totally disagree; 7=totally agree). As no prior research discusses this concept in an empirical manner, we develop the scale based on theoretical literature focusing on social overload

(e.g., Baum et al. 1982; McCarthy and Saegert 1978). As mentioned, our understanding of stress is based on the definition of Berg et al. (2010, p. 988), who argue that individuals perceive "*adverse feelings, such as anxiety, fear, irritation, pressure, and sadness that are caused by an imbalance between the individual's motivations and abilities and the environment's requirements and supports*". For capturing the stressor social overload, we focus on a user's perception of irritation. The reason for this lies in the scale development. A pre-study with a group of students revealed that anxiety, fear, pressure, and sadness are not relevant in the overload dimensions in the context of one's voluntary SNS usage (here exemplified as Facebook usage), whereby irritation is named by merely each student. To ensure the content validity the items have additionally been discussed within our project group.

Strain. For capturing strain, we use two different scales. The first one focuses on emotional exhaustion and is introduced by Maslach and Jackson (1986). The second one addresses emotional as well as cognitive irritations (Mohr et al. 2005; Müller et al. 2004). Both scales are adapted to the SNS context (here: Facebook; see Appendix). Overall, we ask participants to indicate their extent of strain on 12 items with the help of Likert scales (1=totally disagree; 7=totally agree).

Satisfaction. An individual's satisfaction with the SNS is measured with the help of the scale provided by Au et al. (2008). We adapt the items to fit our context. Participants are asked to indicate their satisfaction on three items. Here, a 7-point-Likert scale is used (1=totally disagree; 7=totally agree).

Discontinuous Usage Intention. The dependent variable discontinuous usage intention is self-developed. It bases on Bovey and Hede (2001) to propose a user resistance variable for the described phenomenon that SNS user decrease usage intensity or deregister from the platform (Gartner 2011). The three resulting items are visible in the Appendix. We asked participants to specify their intention of Facebook discontinuous usage in terms of a 7-point-Likert scale which ranges from 1 (totally disagree) to 7 (totally agree).

4 Research Results

In order to validate the research model, it is transferred into a structural equation model. Based on that partial least squares method and SmartPLS (Ringle et al. 2005) are used.

4.1 Common Method Bias

Self-reported data can include common method bias (CMB) (Podsakoff et al. 2003). Therefore, we perform a statistical test to determine the extent of CMB. For this purpose, we integrate an additional CMB factor variable in our PLS-model (Podsakoff et al. 2003; Williams et al. 2003). This variable includes every indicator of each construct of our research model. The remaining original constructs are transformed into single-item constructs. Afterwards, the R^2 of these constructs is compared when the CMB factor is included with the case the CMB factor is not included. The method factor explains a delta R^2 of 0.005 so that a ratio of 136:1 is received. By comparing this ratio with prior research using the same procedure to investigate CMB (e.g. Liang et al. 2007), we could state that no signs of CMB influence are observable.

4.2 Measurement Model

Each construct within the presented research model is measured by reflective indicators. Consequently, we have to validate the measurement model with the following four criteria; content validity, indicator reliability, construct reliability, and discriminant validity (Bagozzi 1979).

Content Validity. In section 3.2, we explain that the items of strain and satisfaction are used in prior research. These items have proven to be robust. As we adapt them to fit our SNS context, we included them into a pre-study and verified their validity. Social overload and discontinuous usage are newly

developed, because no prior research has empirically investigated these issues. Based on prior theoretical research, we develop items and validate them within our pre-study.

Indicator Reliability. Indicator reliability reflects the relation of the variance of an indicator that comes from the latent variables. To explain more than 50 per cent of the variance of a latent variable by the indicators, each value should be higher than 0.707 (Carmines and Zeller 2008). Table 2 verifies that this condition is fulfilled. Additionally, all loadings are significant on a level of at least 0.001 as it is tested by performing a bootstrap method with 5,000 samples.

Construct Reliability. The quality at the construct level is determined by composite reliability (CR), which should be 0.7 or higher, and average variance extracted (AVE), which should be 0.5 or higher (Fornell and Larcker 1981). Both criteria are fulfilled as it is visible in Table 2.

Discriminant Validity. The extent to which measurement items differ from one another is described by discriminant validity (Campell and Fiske 1959). For this purpose, the square root of AVE is included in Table 2 on the diagonal of latent variable correlation. These values are greater than the corresponding construct correlation (Fornell and Larcker 1981; Hulland 1999), so that it could be stated that the measurement model is valid.

	Construct	Item	Loading	Mean	AVE	CR	1	2	3	4
1	Social Overload	SO-1	0.907	2.70	0.73	0.94	0.855			
		SO-2	0.912							
		SO-3	0.898							
		SO-4	0.827							
		SO-5	0.822							
		SO-6	0.752							
2	Emotional Exhaustion	Strain-1	0.727	2.50	0.71	0.97	0.69	0.842		
		Strain-2	0.796							
		Strain-3	0.865							
		Strain-4	0.857							
		Strain-5	0.901							
		Strain-6	0.897							
		Strain-7	0.835							
		Strain-8	0.787							
		Strain-9	0.901							
		Strain-10	0.911							
		Strain-11	0.722							
		Strain-12	0.872							
3	Satisfaction	SAT-1	0.841	4.94	0.71	0.88	-0.42	-0.58	0.843	
		SAT-2	0.857							
		SAT-3	0.832							
4	Discontinuous Usage Intention	DisCon-1	0.889	2.93	0.68	0.86	0.42	0.54	-0.61	0.822
		DisCon-2	0.755							
		DisCon-3	0.814							
On the diagonal the square root of the AVE. Loadings are significant on p <0.001 level										

Table 2. Measurement Model and Bivariate Correlations

4.3 Structural Model

In order to evaluate the structural model, the coefficient of determination (R^2) and significance levels of each path coefficient are used (Chin 1998). Figure 1 illustrates that the variable social overload explains 47.4 per cent of strain. The outcome variables satisfaction and discontinuous usage intention have an R^2 of 33.8 per cent respectively 42.7 per cent. For the four path coefficients in our research model, we can state that all hypothesized paths are significant.

In summary, all four hypotheses are confirmed.

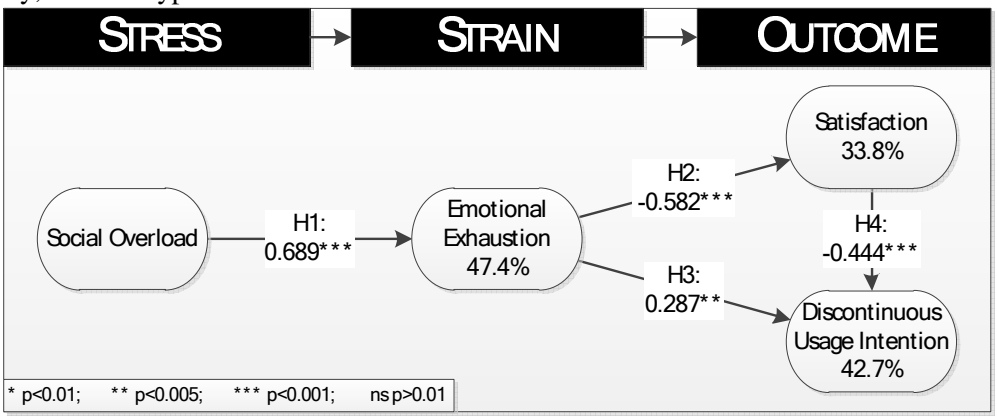

Figure 1. Research & Structural Model (based on the stress-strain-outcome model)

4.4 Mediation Effect

The stress-strain outcome model suggests an indirect effect of stress on outcome variables through strain in a theoretical manner. In our case, we expect that the stressor social overload has an indirect influence on satisfaction and discontinuous usage intention through the strain variable emotional exhaustion. This will be verified empirically with two mediation tests.

Preacher and Hayes (2004) suggest performing bootstrapping methods when investigating mediation effects. In a first step, we focus on the indirect effect of social overload on satisfaction through strain. The bootstrapping method indicates that the indirect effect is 0.04 and the associated 95%-bias corrected confidence interval is between -0.225 and -0.383 (1,000 numbers of bootstrap resamples). In a second step, we discuss the indirect effect of social overload on discontinuous usage intention through strain, which is 0.04 with a 95%-bias-corrected confidence interval and ranges from 0.224 to 0.385 (1,000 numbers of bootstrap resamples). Summing up, the bias-corrected confidence interval does not include zero in both cases, so that we can state that the effect of social overload is mediated by strain on outcome variables.

In addition, we perform the three step approach proposed by Baron and Kenny (1986). The result of this test suggests a full mediation of the influence of social overload on both dependent variables as social overload has no effect on satisfaction ($\beta = -0.04$; $p > 0.15$) and discontinuous usage ($\beta = 0.08$; $p > 0.15$) when integrating strain as mediator in the model, although social overload significantly influences strain and satisfaction respectively discontinuous usage in separate models.

4.5 Limitations

The results provided in this article are limited by some issues. We validate our results only in one particular context, as we use SNS (with the example of Facebook). All participants have the same cultural background. We control our results with the help of demographic variables (e.g., age, gender) and SNS usage variables (number of connected friends, hours of usage). Here, we identify that these factors have no influence on discontinuous usage intention. Nonetheless, we do not include other control variables, such as perceived enjoyment or hedonic outcomes, which are identified as important when examining user behaviour in voluntary hedonic technology usage settings. Besides, there might be other stressors during the usage of IT as well. But as the focus on the stressor social overload is the main objective of our research, we do not integrate other stressors in our research model.

5 Discussion, Implications, and Future Research

This research aims at explaining hedonic IS-induced stress and introduces the concept of social overload into IS-research in general and technology adoption research in particular. Coming from social psychology, we explain the concept of stress as well as its importance in the context of discontinuous usage intention. In general, the presented research has several implications.

First, we respond to the call of Thomée et al. (2007) as we incorporate a stressor into technology adoption research. Hence, we use the stress-strain-outcome model and adapt it with variables, which are relevant in the context of hedonic technologies. Although Thomée et al. (2007) suggest that extensive ICT usage is associated with the risk of experiencing stress we go one step further and validate this mechanism empirically. We reveal that ICT stressors effect strain, which in turn has an effect on the outcome variables satisfaction and discontinuous usage intention.

Second, the research emphasizes the importance of the stressor social overload in the context of SNS usage. Due to high numbers of SNS users (e.g. Facebook), the number of posts a user has to read after logging in increases rapidly. In some cases, a user perceives the need to react to messages by commenting them, express comparison, congratulate others, etc. Through such feelings, a user perceives social overload and in the end intends to stop using or deregister from SNS. This knowledge has practical consequence for providers of SNS, for users, and for companies. On the one hand, each provider of SNS intends to increase the number of users. To hinder individuals deregistration due to social overload, providers should create better opportunities for users to configure, which messages become visible and which remain hidden. On the other hand, users have to get aware of the problem to perceive social overload. This implies that users should not accept everybody as a virtual friend so that they receive fewer messages. Such behaviour reduces individuals' perception of stress and strain. Here, future research can investigate how this kind of stress influences other areas of life, such as work, education, or real life interactions. It would be interesting to see, if organizations, which allow employees using SNS at work – for instance to recruit individuals or to market an organization or its products – have performance losses due to the fact that their employees' feel stressed while using Facebook at work. Otherwise, when more and more individuals start to deregister or lose their interest in spending time in SNS, organizations have no need to use social media for marketing (Culnan et al. 2010).

Third, we go in line with prior research (Song et al. 2011) and include minor daily stressors in technology adoption research in order to explain an individual's discontinuous usage intention. Based on the stress-strain-outcome model, the stressor social overload influences discontinuous usage through strain. This is validated empirically in this article. Strain, for instance in terms of emotional exhaustion, is not introduced in prior stress-related technology adoption research (Ragu-Nathan et al. 2008; Tarafdar et al. 2010/2011). This article shows that emotional exhaustion is an important strain factor in voluntary technology usage. By incorporating this variable, we explain a high variance in the outcome variables individuals' satisfaction and discontinuous usage intention. Besides, the introduction of the new variables strain and discontinuous usage intention lead to two interesting further research possibilities. On the one hand, discontinuous usage intention can be introduced into expectation-confirmation research (Bhattacherjee 2001) in order to consider both, continuous and discontinuous usage intention. This is essential as both are driven by distinct perceptual beliefs (Cenfetelli 2004). Here, we motivate further research to focus on other stressors as technostress (Ragu-Nathan et al. 2008) or information overload (Jones et al. 2004). Despite of this, such a research can reveal, which kind of stressors influences users' discontinuous usage intention to the highest degree. On the other hand, the aspect of strain should be integrated in future IS stress-related research as it depicts a mediator variable between stressors and outcome variables. Our results suggest emotional exhaustion as a full mediator so that stressors have no effect on outcome variables when introducing the strain variable. For instance, Ragu-Nathan et al. (2008) discuss the influence of the stressor technostress in a work-related context and suggest satisfaction and turnover intention as dependent

variables, which are influenced by the stressor technostress, but neglect introducing a psychological strain variable such as emotional exhaustion. As we explain a high variance of satisfaction and discontinuous usage intention through the introduction of emotional exhaustion, we think that a significant higher R^2 of satisfaction and turnover intention can be achieved when using emotional exhaustion in mandated settings. Here, future research can investigate this in more detail.

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Appendix

Construct	Item-#	Item	References
Social Overload	SO-1	I feel irritated, because I take too much care of my facebook-friends well-being in Facebook.	self-developed, based on: McCarthy & Saegert 1978; Baum et al. 1982
	SO-2	I feel irritated, because I deal too much with problems of my facebook-friends in Facebook.	
	SO-3	I feel irritated, because I feel myself too strong responsible for the fun of my facebook-friends in Facebook.	
	SO-4	I feel irritated, because I am too often in the responsibility, to care for my facebook-friends in Facebook.	
	SO-5	I feel irritated, because I pay too much attention to posts of my facebook-friends in Facebook.	
	SO-6	I feel irritated, because I congratulate facebook-friends in Facebook as a consequence of the birthday reminder, although I would not congratulate them in the real life.	
Emotional Exhaustion	Strain-1	It is hard for me to relax after using Facebook.	based on: Maslach & Jackson (1986); Mohr et al. 2005; Miller et al. 2004
	Strain-2	If others speak to me while using Facebook, I will sometimes give a tasty reply.	
	Strain-3	I am easily annoyed while using Facebook.	
	Strain-4	I sometimes act aggressively in Facebook, although I do not want to do so.	
	Strain-5	I feel irritable after using Facebook for hours.	
	Strain-6	I feel emotionally drained from using Facebook.	
	Strain-7	I feel used up at the end of using Facebook several hours.	
	Strain-8	I feel fatigue when I get up in the morning and being confronted with news in Facebook.	
	Strain-9	I feel burned out from using Facebook.	
	Strain-10	I feel frustrated by using Facebook.	
	Strain-11	I fell I'm using Facebook too long.	
	Strain-12	Using Facebook puts too much stress on me.	
Satisfaction	SAT-1	I am very contented with Facebook.	based on: Au et al. 2008
	SAT-2	I am delighted with Facebook.	
	SAT-3	Overall, I am very satisfied with Facebook.	
Discontinuous Usage Intention	DiscU-1	I will de-register in Facebook.	self-developed, based on: Bovey & Hede 2001
	DiscU-2	In the future, I will use another social network site.	
	DiscU-3	In future, I will use Facebook far fewer than today.	

Table 3. Scale Items